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PATENT APPLICATION

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re application of

Docket No: Q55898

Eiji OGAWA

Appln. No.: 09/536,315

Group Art Unit: 2121

Confirmation No.: 4621

Examiner: Ronald D. Hartman Jr.

Filed: March 27, 2000

For: QUALITY CONTROL SYSTEM FOR MEDICAL DIAGNOSTIC APPARATUS

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.37, Appellant submits the following:

Table of Contents

I. REAL PARTY IN INTEREST.....	2
II. RELATED APPEALS AND INTERFERENCES.....	3
III. STATUS OF CLAIMS	4
IV. STATUS OF AMENDMENTS.....	5
V. SUMMARY OF THE CLAIMED SUBJECT MATTER	6
VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL	8
VII. ARGUMENT	9
CLAIMS APPENDIX.....	16
EVIDENCE APPENDIX.....	NONE
RELATED PROCEEDINGS APPENDIX.....	NONE

APPEAL BRIEF
UNDER 37 C.F.R. § 41.37
U. S. Application No. 09/536,315.

ATTORNEY DOCKET NO. Q55898

I. REAL PARTY IN INTEREST

Based on the information supplied by the Appellant, and to the best of Appellant's legal representative's knowledge, the real party in interest is the assignee, FUJI PHOTO FILM CO., LTD. The Assignment was recorded on March 27, 2000 at Reel 010712, Frame 0925.

II. RELATED APPEALS AND INTERFERENCES

Appellant, as well as Appellant's assigns and legal representatives, are unaware of any appeals or interferences which will be directly affected by, or which will directly affect or have a bearing on, the Board's decision in the pending case.

III. STATUS OF CLAIMS

Claims 1-12 and 14-38 are pending in the application, have been finally rejected, and are the subject of this appeal. Claims 1-12 and 14-38, as finally rejected and appealed, are set forth in the Appendix.

Claim 13 (canceled).

Claims 1-12 and 14-38 (rejected).

Claims 1-12 and 14-38 stand rejected under 35 U.S.C. § 103 as being unpatentable over Jenkins (U.S. Patent No. 5,365,310) in view of Hoebel (U.S. Patent No. 5,400,792).

APPEAL BRIEF
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ATTORNEY DOCKET NO. Q55898

IV. STATUS OF AMENDMENTS

No amendments have been filed subsequent to the final office action.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

The present invention provides, in an exemplary embodiment, a quality control system for medical diagnostic apparatuses (see Fig. 1, for example), wherein the medical diagnostic apparatuses include at least one medical image input device (e.g., reading device B (20) of Fig. 1). The quality control system can include: a plurality of medical image input devices (e.g., reading devices A (18) and B (20)) holding respective histories of evaluation results on specified items regarding image quality of individual medical image input devices; a control device 30 (see Fig. 1) which stores all of the histories of the evaluation results regarding the image quality which respective medical image input devices hold to control the histories thereof centrally; and a network (e.g., bus 10 of Fig. 1) onto which the plurality of medical image input devices and the control device are connected. *Also, see paragraph bridging pages 5 and 6 of subject specification, and claim 1, for example.*

In another exemplary embodiment of the present invention, there is provided a quality control system, for one or more medical diagnostic apparatuses (see Fig. 1, for example), that includes: one or more medical diagnostic apparatuses, wherein at least one of the medical diagnostic apparatuses automatically outputs information relating to image quality of at least one of the one or more medical diagnostic apparatuses (*see page 10, lines 8-22 of subject specification*); a device (e.g., control device 30 of Fig. 1) for storing information relating to the image quality of the medical diagnostic apparatuses; and a network (e.g., bus 10) onto which the medical diagnostic apparatuses and the device are connected. *Also, see independent claim 14, for example.*

In yet another exemplary embodiment, the present invention provides a quality control system for medical diagnostic apparatuses (see Fig. 1, for example), including: a plurality of medical diagnostic apparatuses, wherein the plurality of medical apparatuses includes at least one medical image input device (e.g., reading device B (20)) and at least one medical image output device (e.g., display device C (16)) (the medical image input device can have a history of evaluation results related to its image quality); a control device 30 (see Fig. 1) which stores histories of evaluation results related to image quality of individual medical diagnostic apparatuses, to control the histories thereof centrally; and a network onto which the plurality of medical diagnostic apparatuses and the control device are connected. *Also, see independent claim 15.*

The claimed subject matter also includes the subject matter recited in each of independent claims 3 and 18. The descriptions for the elements of independent claims 3 and 18 are similar to the descriptions above.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Claims 1-12 and 14-38 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Jenkins (U.S. Patent No.: 5,365,310) in view of Hoebel et al. (U.S. Patent No.: 5,400,792).

VII. ARGUMENT

A. *Claims 1-12 and 14-38 would NOT have been obvious, within the meaning of § 103(a), over Jenkins and Hoebel.*

A.1. The combination of Jenkins and Hoebel does not teach devices holding respective histories of evaluation results as described by independent claims 1, 3, 15, and 18, or their dependent claims.

With respect to independent claim 1, Appellant submits that neither Jenkins nor Hoebel, either alone or in combination, teaches or suggests at least “a plurality of medical image input devices holding respective histories of evaluation results...,” (emphasis added) as recited in claim 1. That is, Jenkins, which allegedly discloses the above-quoted feature of claim 1, only discloses that information related to copy quality is transmitted to a diagnostic computer. *See col. 3, lines 45-63.* Nowhere, however, does Jenkins disclose that a medical image input device holds respective histories of evaluation results.

In the most recent Office Action dated June 3, 2004, in response to the arguments set forth above, the Examiner alleges that, “since the copy quality is generated, it must be stored before it is transmitted, and this storage, however brief, adequately contemplates the claimed feature,” as set forth above.

In response, Appellant maintains the same arguments set forth above and further submits that neither of the applied references teaches or suggests that copy quality related information is stored before it is transmitted. Nothing in the applied references even suggest that such copy quality information would be held, even for a brief period of time. Moreover, in the rejections of claims 34-38, the Examiner acknowledges that a history is more than a single entry. *See June 3rd*

Office Action, page 10, last full paragraph. The Examiner cannot assume that the copy quality transmitted in Jenkins comports with multiple entries as opposed to a single evaluation result. Therefore, there is no requirement for evaluation histories being held in Jenkins, which are also provided to a control device as claimed. The Examiner's apparent reliance on inherent disclosure of this feature is not supported. Appellant submits, therefore, that the Examiner has made this conclusion only in view of the specification of the present invention; that is, the Examiner has used impermissible hindsight reasoning. Claims 3, 15, and 18 recite a device for holding histories similar to claim 1 as set forth above, and are patentable over Jenkins and Hoebel for similar reasons.

A.2. The combination of Jenkins and Hoebel is not appropriate to teach the system including the medical diagnostic apparatuses or medical input apparatuses of claims 1, 3, 14, 15, and 18, and their dependent claims.

Further, Appellant submits that nowhere does Jenkins discuss "medical diagnostic apparatuses" and/or "medical image input devices", as recited in claim 1. The Examiner admits this much, however, the Examiner believes that the secondary reference Hoebel satisfies these features, and alleges, in the Office Action dated December 19, 2003,

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have allowed for Hoebel's medical diagnostic apparatus to be incorporated into the teachings of Jenkins since it would allow for a more effective way of controlling image quality by providing for a central control means to automatically monitor and control aspects of the imaging system or apparatus so that an operator or service technician need not be located at the facility where the image apparatus is physically located. *See page 4 of Office Action dated December 19, 2004.*

In response, Appellant submits that it would NOT have been obvious to combine Hoebel with Jenkins, as there is no teaching or suggestion in either of the references to combine the teachings of remotely diagnosing copy quality defects (of Jenkins) with the teachings of controlling a medical diagnostics installation (of Hoebel). That is, the teachings of Jenkins and Hoebel are so different that one skilled in the art related to one of the two references would NOT have been led to the other reference for the purpose of developing a more effective way of controlling image quality. In fact, nowhere is copying or scanning machinery (Jenkins) discussed with respect to the medical diagnosing processes of Hoebel. The Examiner has apparently used impermissible hindsight reasoning in arriving at his conclusions that one skilled in the art would have been led to combine Hoebel and Jenkins. At least based on the foregoing, Appellant maintains that independent claim 1 is patentably distinguishable over the applied references, either alone or in combination.

In response to the argument in the paragraph above, the Examiner cites a two-part test for determining impermissible hindsight, and alleges that the second part of the two-part test is applicable. With respect to the second part of the two-part test set forth on page 3 of the June 3rd Office Action, the Examiner alleges:

Both inventions are related towards the remote diagnosis and control of image quality and Hoebel was specifically applied to show that remote control of image quality, taught by Jenkins, is equally applicable in a specific medical imaging environment. Therefore, the Examiner respectfully disagrees with the Applicant that impermissible hindsight was used in combining the references as both references deal with image quality and the need for proper monitoring and controlling of parameters associated with this quality.

In response, Appellant submits that the question is whether one of ordinary skill in the art at the time of the invention would have even combined Hoebel with Jenkins without the advantage of hindsight and knowledge of the present specification. *See In re Antle*, 444 F.2d 1168 (CCPA 1971). Appellants submit that at least since Jenkins fails to even mention the application of the invention described therein to the medical diagnostic field, and at least since Hoebel does not even mention remotely diagnosing copy quality defects, one skilled in the art would NOT have combined the applied references with each other, to arrive at the present invention. Appellant submits that the Examiner combined the two applied references only after benefiting from the advantage of knowledge of the present specification. Therefore, at least based on the foregoing, Appellant maintains that independent claim 1 is patentably distinguishable over the applied references, either alone or in combination.

Appellant submits that independent claims 3, 14, 15, and 18 are patentable at least for the reasons set forth above that it would NOT have been obvious to combine Hoebel with Jenkins.

With respect to dependent claims 2, 4-12, 16, 17, and 19-38, Appellant submits that these claims are patentable at least by virtue of their respective dependencies from independent claims 1, 3, 14, 15, and 18.

A.3. The combination of Jenkins and Hoebel does not teach that one of the plural medical apparatuses acts as said control device as described in claims 11 and 16.

Further, with respect to dependent claims 11 and 16, Appellant traverses the Examiner's argument that the features of claims 11 and 16 would have been obvious over the applied

references. That is, Appellant submits that, even if, *assuming arguendo*, allowing one of the imaging devices to function as the control device would have been a more simple control system (as the Examiner alleges on page 7 of the Office Action dated June 3, 2004), neither Jenkins nor Hoebel teaches or suggests this much, and one skilled in the art would not necessarily have been led to implement the features of claims 11 and 16 to effectuate a simplified control system, absent the benefit of the knowledge of the present application. The mere fact that a certain thing (a simplified control system) may result from a given set of circumstances (allowing an imaging device to function as the control device) is not sufficient to establish that the features set forth in claims 11 and 16 are obvious over the applied references.

A.4. The combination of Jenkins and Hoebel does not teach that the image quality includes at least one of sensitivity, granularity, root mean square (RMS), detective quantum efficiency (DQE), brightness characteristic of a soft copy display device and resolution characteristic of the soft copy display device, as described in claims 19-23, and Reitan (U.S. Patent No. 5,600,574) can not be applied to support the final rejections of claims 19-23.

Yet further, with respect to claims 19-23, the Examiner acknowledges that the limitations of these claims are not disclosed in Jenkins however the Examiner alleges that the limitations of these claims “are all believed to be obvious known quantitative measurement means by which images are analyzed to determine deficiencies in the images”. *See page 6 of Office Action dated December 19, 2003.* In response, Appellant submits that neither Jenkins nor Hoebel discloses the particular limitations of claims 19-23, and the Examiner appears to have yet again used impermissible hindsight reasoning in arriving at his conclusions.

Yet even further, with respect to claims 19-23, in the June 3rd Office Action, in the *Response to Arguments* section, the Examiner cites new applied reference Reitan (U.S. Patent 5,600,574) as allegedly showing the features set forth in claims 19-23. In response, if the Examiner wishes to rely on this reference as allegedly satisfying the limitations recited in claims 19-23, Appellant submits that the new applied reference has been improperly applied, as this reference was not previously applied to support the rejections of claims 19-23, and claims 19-23 have not been amended since the previous Office Action. Therefore, Appellant submits that the Examiner's reliance on Reitan is improper, and Appellant maintains the arguments set forth in the paragraph above. Appellant respectfully requests that the Examiner re-open prosecution and issue a new non-final Office Action if the Examiner continues to rely on Reitan to support the rejections of claims 19-23. *See MPEP §§ 707.07(a) and 1208.01.*

A.5. The Examiner's contradictory arguments have resulted in an unclear record with respect to the Examiner's position, and do not support the claim rejections of claims 34-38.

Further, the Examiner contradicts himself acknowledging that one entry (e.g., copy quality) does not equal history. Therefore, brief storage of copy quality cannot be holding histories, by the Examiner's own admission. The record is clearly contradictory, therefore the rejection of claim 1 should be overruled, the rejections of claims 34-38 (reciting that "histories of evaluation results are multiple data entries over time") should be overruled, or all of the rejections should be overruled.

APPEAL BRIEF
UNDER 37 C.F.R. § 41.37
U. S. Application No. 09/536,315.

ATTORNEY DOCKET NO. Q55898

A.6. Conclusion

Appellant submits that, at least based on the foregoing, the present invention, as recited in each of claims 1-12 and 14-38, is patentably distinguishable over the applied references either alone or in combination.

Unless a check is submitted herewith for the fee required under 37 C.F.R. §41.37(a) and 1.17(c), please charge said fee to Deposit Account No. 19-4880.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

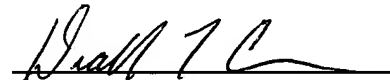
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23373

CUSTOMER NUMBER



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Registration No. 52,778

Date: January 14, 2005

CLAIMS APPENDIX

CLAIMS 1-12 and 14-38 ON APPEAL:

1. A quality control system for medical diagnostic apparatuses, wherein said medical diagnostic apparatuses comprise at least one medical image input device, said quality control system comprising:

a plurality of medical image input devices holding respective histories of evaluation results on specified items regarding image quality of individual medical image input devices;

a control device which stores all of the histories of said evaluation results regarding the image quality which respective medical image input devices hold to control the histories thereof centrally; and

a network onto which said plurality of medical image input devices and said control device are connected.

2. The quality control system according to claim 1, wherein said medical diagnostic apparatuses comprise at least one medical image output device that is connected onto said network.

3. A quality control system for medical diagnostic apparatuses, wherein said medical diagnostic apparatuses comprise at least one medical image input device, said quality control system comprising:

a plurality of medical image input devices;

a control device which stores all histories of evaluation results on specified items regarding image quality of individual medical image input devices to control the histories thereof centrally; and

a network onto which said plurality of medical image input devices and said control device are connected.

4. The quality control system according to claim 3, wherein said medical diagnostic apparatuses comprise at least one medical image output device that is connected onto said network.

5. The quality control system according to claim 2, wherein said at least one medical image output device has a history of evaluation results related to its quality and said control device stores the history of evaluation results related to quality of said at least one medical output device, to control the history thereof centrally.

6. The quality control system according to claim 2, wherein said at least one medical image output device includes a soft copy display device.

7. The quality control system according to claim 4, wherein said control device also stores a history of evaluation results related to quality of said at least one medical output device, to control the history thereof centrally.

8. The quality control system according to claim 4, wherein said at least one medical image output device includes a soft copy display device.

9. The quality control system according to claim 1, further comprising a portable testing unit for performing an image quality check.

10. The quality control system according to claim 3, further comprising a portable testing unit for performing an image quality check.

11. The quality control system according to claim 1, wherein at least one of said plurality of medical diagnostic apparatuses is said control device.

12. The quality control system according to claim 3, wherein said at least one of said plurality of medical diagnostic apparatuses immediately outputs said history of evaluation results on specified items regarding quality of at least one of said plurality of medical diagnostic apparatuses, after determining said history.

13. (canceled).

14. A quality control system, for one or more medical diagnostic apparatuses, comprising:

one or more medical diagnostic apparatuses, wherein at least one of said one or more medical diagnostic apparatuses automatically outputs information relating to image quality of at least one of said one or more medical diagnostic apparatuses;

a device for storing information relating to the image quality of said one or more medical diagnostic apparatuses; and

a network onto which said one or more medical diagnostic apparatuses and said device are connected.

15. A quality control system for medical diagnostic apparatuses, comprising:
a plurality of medical diagnostic apparatuses, wherein said plurality of medical apparatuses comprises at least one medical image input device and at least one medical image

output device, said at least one medical image input device having a history of evaluation results related to its image quality;

a control device which stores histories of evaluation results related to image quality of individual medical diagnostic apparatuses, to control the histories thereof centrally; and

a network onto which said plurality of medical diagnostic apparatuses and said control device are connected.

16. The quality control system according to claim 15, wherein at least one of said plurality of medical diagnostic apparatuses is said control device.

17. The quality control system according to claim 11, further comprising a portable testing unit for performing an image quality check.

18. A quality control system for medical diagnostic apparatuses, comprising:
a plurality of medical diagnostic apparatuses, wherein at least one of said plurality of medical diagnostic apparatuses automatically outputs a history of evaluation results on specified items regarding image quality of at least one of said plurality of medical diagnostic apparatuses, to a control device;

said control device stores all histories of evaluation results on specified items regarding image quality of individual medical diagnostic apparatuses, to control the histories thereof centrally; and

a network onto which said plurality of medical diagnostic apparatuses and said control device are connected.

19. The quality control system according to claim 1, wherein said image quality includes at least one of sensitivity, granularity, root mean square (RMS), detective quantum efficiency (DQE), brightness characteristic of a soft copy display device and resolution characteristic of the soft copy display device.

20. The quality control system according to claim 3, wherein said image quality includes at least one of sensitivity, granularity, root mean square (RMS), detective quantum efficiency (DQE), brightness characteristic of a soft copy display device and resolution characteristic of the soft copy display device.

21. The quality control system according to claim 14, wherein said image quality includes at least one of sensitivity, granularity, root mean square (RMS), detective quantum efficiency (DQE), brightness characteristic of a soft copy display device and resolution characteristic of the soft copy display device.

22. The quality control system according to claim 15, wherein said image quality includes at least one of sensitivity, granularity, root mean square (RMS), detective quantum efficiency (DQE), brightness characteristics of a soft copy display device and resolution characteristic of the soft copy display device.

23. The quality control system according to claim 18, wherein said image quality includes at least one of sensitivity, granularity, root mean square (RMS), detective quantum efficiency (DQE), brightness characteristic of a soft copy display device and resolution characteristic of the soft copy display device.

24. The quality control system according to claim 1, wherein said quality control system is applied to a computerized radiography (CR) imaging system.

25. The quality control system according to claim 3, wherein said quality control system is applied to a computerized radiography (CR) imaging system.

26. The quality control system according to claim 1, wherein at least one of said plurality of medical image input devices originates an image from a source being imaged using energy conversion to an electrical signal.

27. The quality control system according to claim 3, wherein at least one of said plurality of medical image input devices originates an image from a source being imaged using energy conversion to an electrical signal.

28. The quality control system according to claim 15, wherein said at least one medical image input device originates an image from a source being imaged using energy conversion to an electrical signal.

29. The quality control system according to claim 14, wherein said at least one of said one or more medical diagnostic apparatuses comprises a local memory, said local memory outputting said information relating to image quality of at least one of said one or more medical diagnostic apparatuses during said automatic outputting operation.

30. The quality control system according to claim 18, wherein at least one of said plurality of medical diagnostic apparatuses comprises a local memory, said local memory outputting said information relating to image quality of at least one of said plurality of medical diagnostic apparatuses during said automatic outputting operation.

31. The quality control system according to claim 1, wherein at least one of said plurality of medical image input devices is selected from one of a computerized radiography (CR) device, a computerized tomography (CT) device, and a magnetic resonance imaging (MRI) device.

32. The quality control system according to claim 3, wherein at least one of said plurality of medical image input devices is selected from one of a computerized radiography (CR) device, a computerized tomography (CT) device, and a magnetic resonance imaging (MRI) device.

33. The quality control system according to claim 15, wherein said at least one medical image input device is selected from one of a computerized radiography (CR) device, a computerized tomography (CT) device, and a magnetic resonance imaging (MRI) device.

34. The quality control system according to claim 1, wherein said histories of evaluation results are multiple data entries over time.

35. The quality control system according to claim 3, wherein said histories of evaluation results are multiple data entries over time.

36. The quality control system according to claim 15, wherein said histories of evaluation results are multiple data entries over time.

37. The quality control system according to claim 18, wherein said histories of evaluation results are multiple data entries over time.

38. The quality control system according to claim 2, wherein said at least one medical image output device stores therein said history of evaluation results related to a quality of said at least one medical image output device.



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SUBMISSION OF APPEAL BRIEF

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Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

Submitted herewith please find an Appeal Brief. A check for the statutory fee of \$500.00 is attached. The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account. A duplicate copy of this paper is attached.

Respectfully submitted,

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